

Bike- and Walk-Friendly Community Plan for ARTS & Aiken County



ARTS Public Meeting: October 4, 2011

*Alta/Greenways in association with:
Wilbur Smith Associates, MPH, Fuss & O'Neill*



“Someday we’ll look back on this
and it will all seem funny”



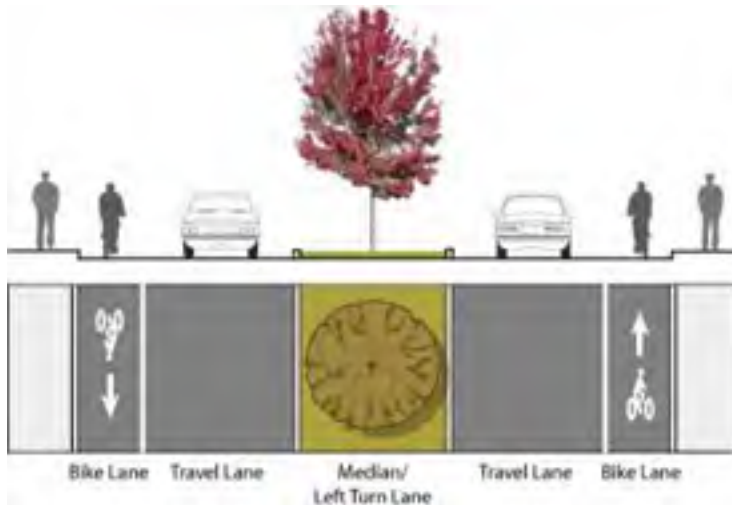
A Fork in the Road



Bicycle & Pedestrian Planning



- What is it?
- Why do we do it?
- Types of pedestrian and bicycle facilities
- Non-facility elements



The Six E's

- E1 – Engineering
- E2 – Education
- E3 – Encouragement
- E4 – Enforcement
- E5 – Evaluation
- E6 – Equity



Bicycle Count Form Greenville, SC

Use a different form for each hour. Count using data, identification, and more. Be specific when counting your location. Make notes of any events, weather, or other unusual occurrences in your log.

Location: _____ (Downtown A) _____ (Downtown B)

Date: _____ Start Time: _____ End Time: _____

Weather: _____ Name: _____

	(A) Male	(B) Male	(A) Female	(B) Female	Total
with helmet on street					
with helmet on sidewalk					
without helmet on street					
without helmet on sidewalk					
Total					

Name: _____

A National Effort...

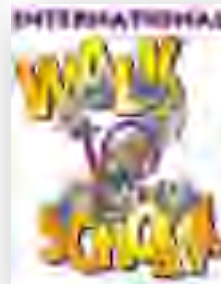


SafeRoutes

National Center for Safe Routes to School



Bicycle
Friendly
Community



NATIONAL
COMPLETE STREETS
COALITION

For Local Solutions...



Bicycle & Pedestrian Planning

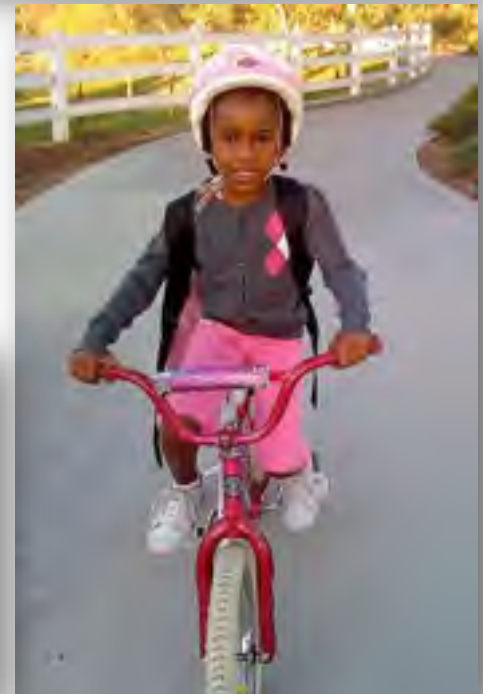


- Creating a system for users of all types & abilities
- Facilities – on-street & off-street
- Treatments to address safety & comfort, traffic calming
- Amenities, such as bike parking & benches
- Programs to encourage, educate, & enforce



Why do we do it?

- Safe, comfortable, viable transportation for all users
 - In 1969, 42% of US kids walked or biked to school, but by 2001, only 16% did so.
 - 25% of all trips are made within a mile of the home, 40% of all trips are within two miles of the home
- Health
- Economy
- Environment



Americans Want Choices



55% of Americans would rather drive less & walk more.

Transit use is growing faster than population or highway travel.

Nearly one-third of Americans don't drive:

- 21% of Americans over 65.
- Children under 16.
- Many low income Americans do not have access to automobiles.





More
complete
streets
like this...



And This...



And fewer like this...



And This...





Basic Steps of Bicycle & Pedestrian Planning

- Visioning & Goals
- Existing Conditions
- Public Input
- Develop Projects & Programs
- Prioritization
- Adoption
- Implementation



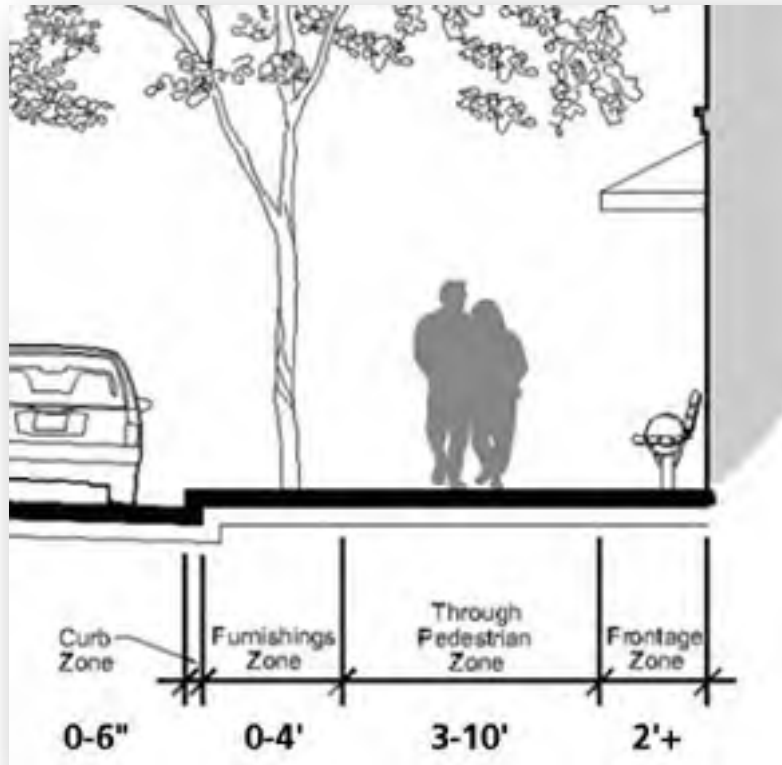


Pedestrian Facilities

- Sidewalks
- Intersections
- Crossing treatments
- Shared use paths



Pedestrian Facilities: Sidewalks



Pedestrian Facilities: Intersections



Pedestrian Facilities: Crossing Treatments



Pedestrian Facilities: ADA and Transit Access



Bicycle Facilities

- Shared roadway
- Shared lane markings
- Bike lanes
- Bicycle boulevards
- Cycle tracks
- Shared use paths
- Paved shoulders



Increasing Bicycle Use

Cyclists
Per Day

Bikeway
Miles

15,000

12,500

10,000

7,500

5,000

2,500

0

350

300

250

200

150

100

50

0

Bridge Bicycle Traffic
Bikeway Miles

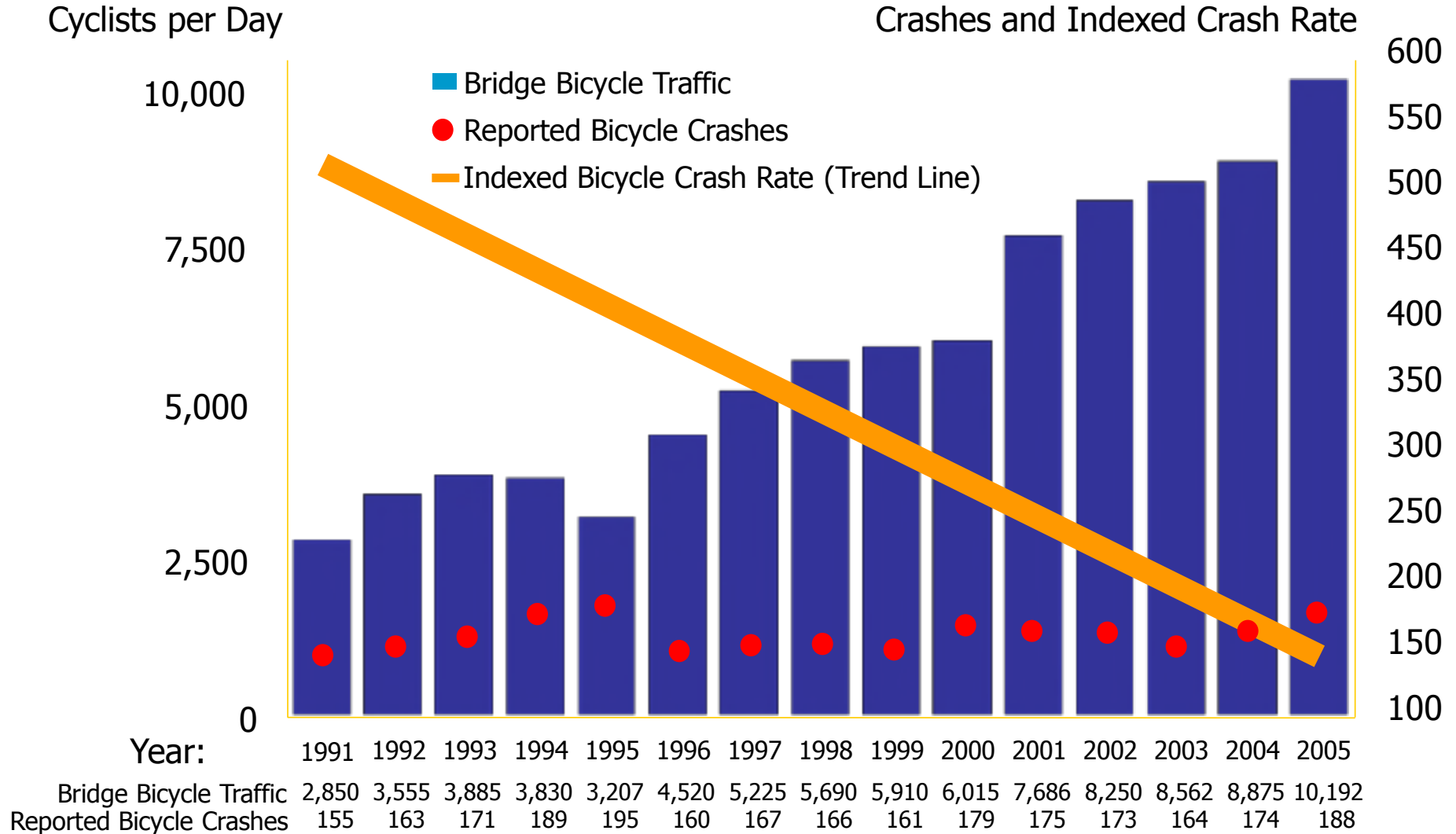
1992:
83 miles of bikeways
2,850 daily trips

2007:
271 miles of bikeways
14,563 daily trips

Year:

Year:	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Bridge Bicycle Traffic	2,850	3,555	3,885	3,830	3,207	4,520	5,225	5,690	5,910	6,015	7,686	8,250	8,562	8,875	10,192	12,046	14,563
Bikeway Miles	78	84	86	103	113	144	166	183	213	222	235	252	254	260	262	263	266

Decrease in Bicycle Crash Rate



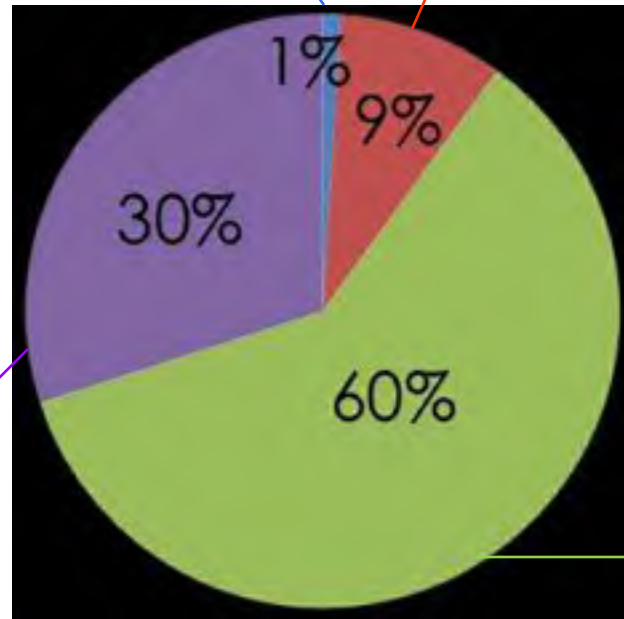
Who are “design” cyclists?



Strong and fearless



Enthusied and confident



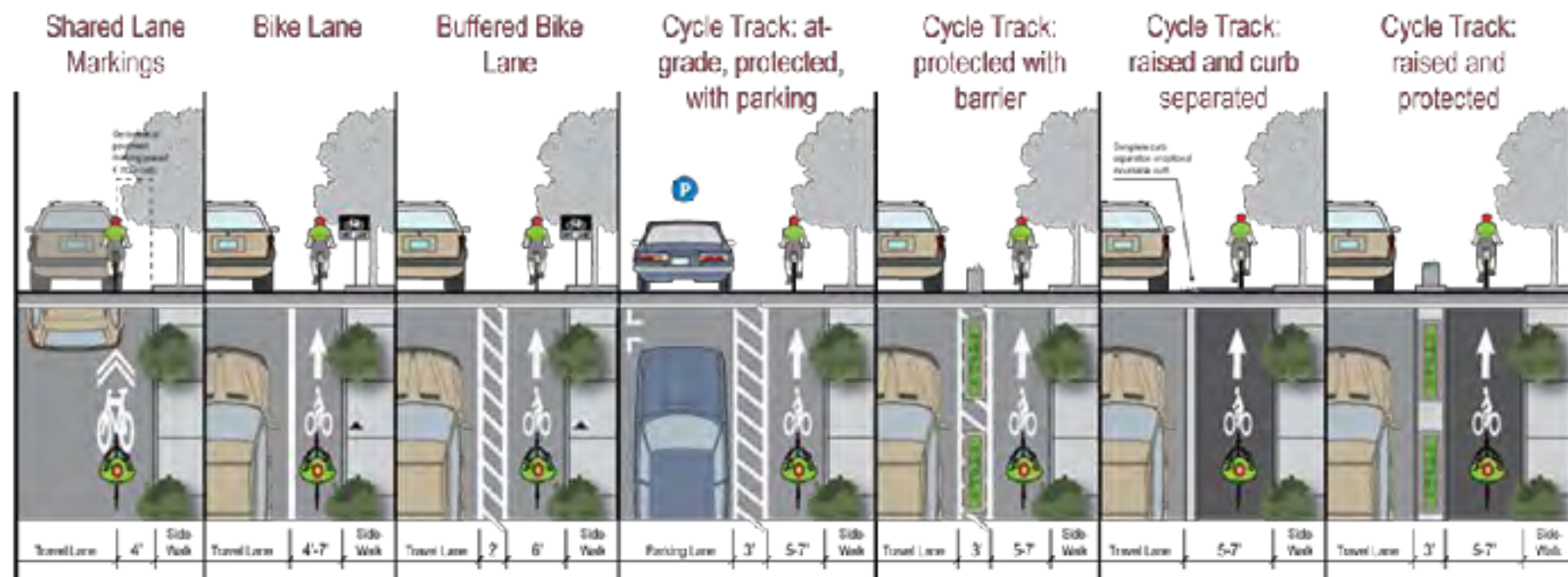
“No way, no how”



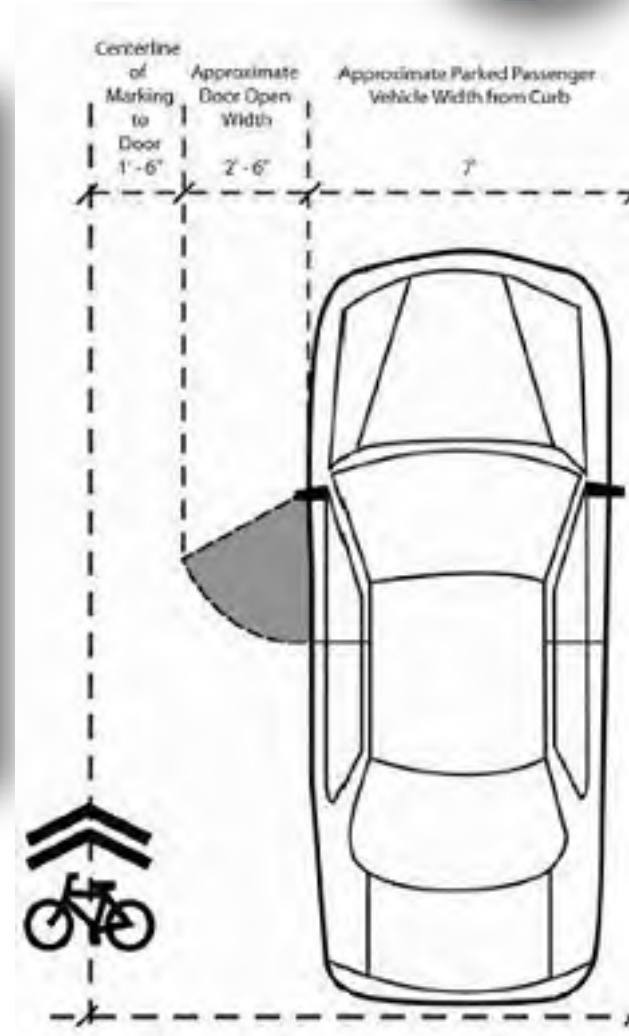
Interested but concerned

least protected

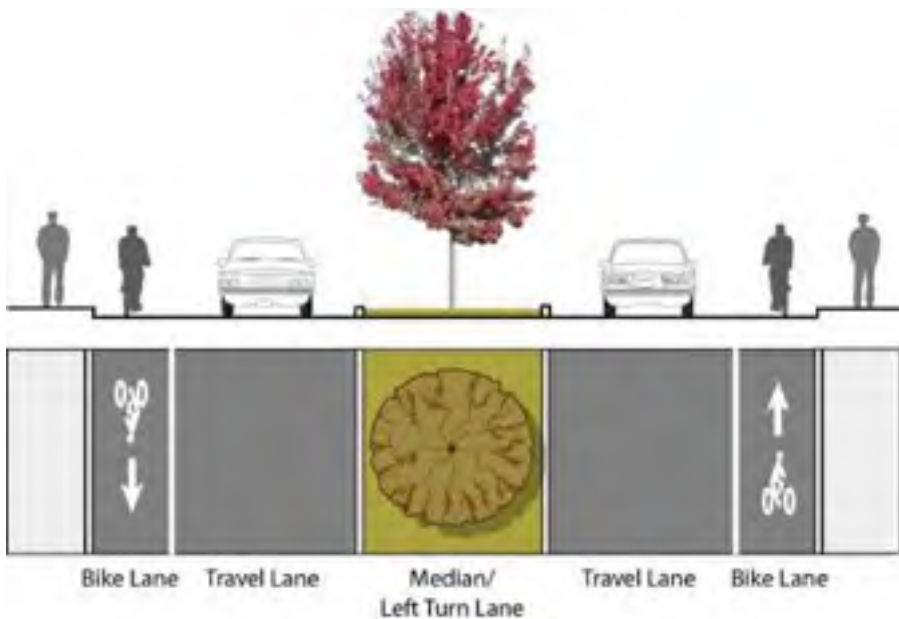
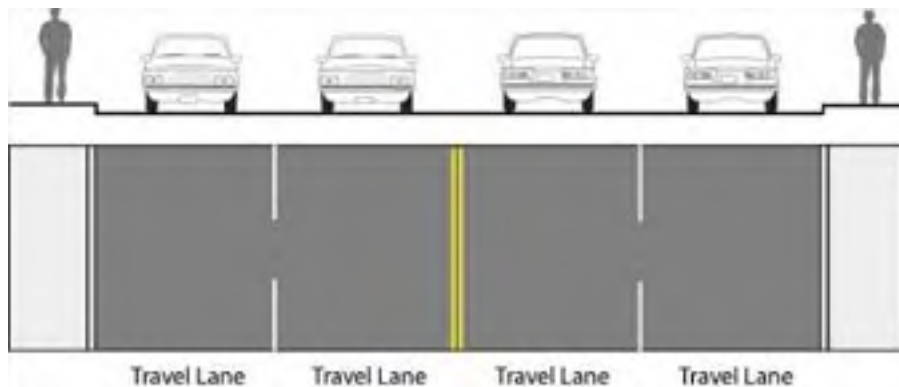
most protected



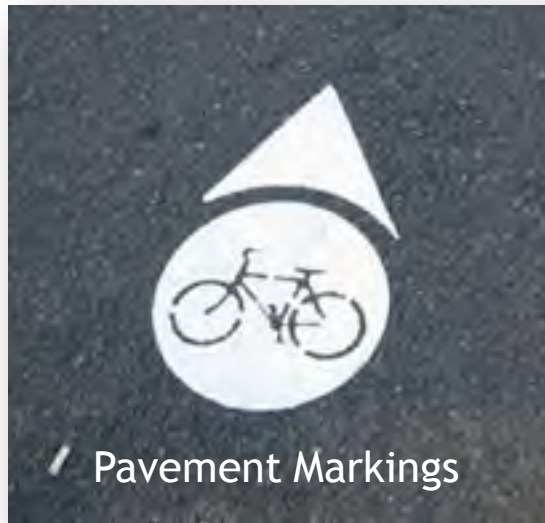
Bicycle Facilities: Shared Lane Markings



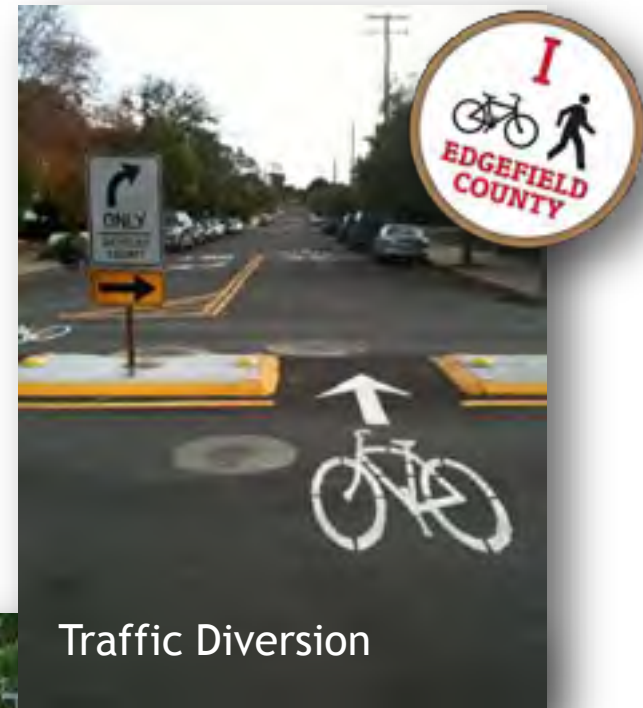
Bicycle Facilities: Bike Lanes



Bicycle Facilities: Bicycle Boulevards



Traffic Calming



Traffic Diversion



Bicycle Facilities: Cycle Tracks (Buffered Lanes)



Traffic Calming



Pavement Markings



Intersection
Treatments



Shared Use Paths

- Separate from vehicle traffic
- Scenic
- Good access points
- Well-designed street crossings
- Separate different users when necessary



Paved Shoulders

- Reduce passing conflicts between cars, bicyclists and pedestrians
- Make a pedestrian who is crossing more visible to motorists
- Provide space for bicyclists to ride at their own pace
- Provide structural support to the roadway pavement



Other Innovative Elements



Programs, Policies, etc...



Recreation



Economic Development & Tourism



ARTS & Aiken County Bicycle & Pedestrian Plans



Bringing National
Expertise to the Local
Community



ARTS Study Area



ARTS Study Area

- Museum
- Golf
- Hospital
- Retail
- College
- Interstate
- US/State Highway
- RailRoad
- Parks
- Airport
- MPO Boundary

Source: Aiken, Columbia, Edgefield, Richmond County and ESRI Data



0 2.5 5 Miles

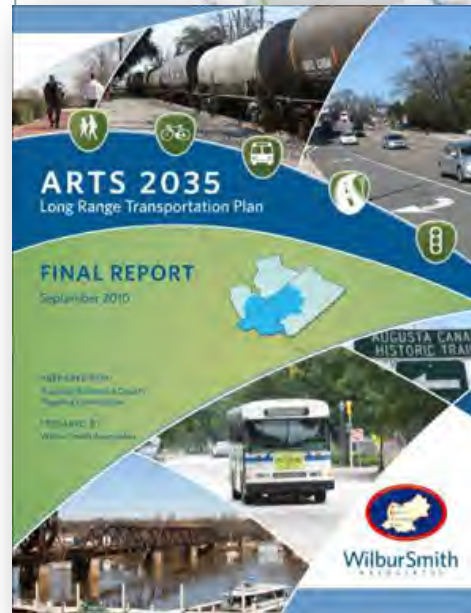


Local Knowledge; National Expertise



Local team experience:

- ARTS LRTP
- North Augusta Greenway Master Plan
- US1/US78 Corridor Study
- LSCOG Bike/Ped Plan
- ARTS Freight Study
- Augusta Transit Study



Project Steering Committee



- Augusta-Richmond County Planning Commission
- Aiken County Planning & Development
- Columbia County Traffic Engineering
- Aiken County Recreation
- GDOT
- SCDOT
- Augusta-Richmond County Planning Commission
- Augusta Sports Council
- Aiken's Mom Club
- Augusta State University
- Columbia County Recreation Department
- Andy Jordan's Bicycle Warehouse
- CSRA Regional Commission
- Augusta Public Transit
- Aiken Vocational Rehab
- Columbia County Schools
- Aiken City Parks, Recreation & Tourism
- Augusta Striders
- SC Department of Public Safety
- Aiken Bicycle Club
- Healthy Augusta
- Augusta-Richmond County Board of Education
- Columbia County Planning & Engineering
- Aiken Sidewalk Appreciation Society
- Lower Savannah Council of Governments
- Wheel Movement
- Columbia County Construction & Maintenance
- Augusta-Richmond County Recreation, Parks & Facilities
- Augusta-Richmond County Traffic Engineering
- Randonneurs USA
- Aiken County Schools
- SC Highway Patrol
- Aiken Public Safety
- Outspokin Bicyclists

Draft Vision Statement



The ARTS/Aiken County Bicycle and Pedestrian Update envisions a network of safe and inviting bicycling and walking paths, trails, and on-street facilities, between South Carolina, Georgia, and the four member counties, that equitably supports economic development, active transportation, healthy lifestyles and improved quality of life for all citizens and visitors of the region.





The Six E's

ENGINEERING

El – Engineering

- Improves infrastructure for bicycling and walking
- Reduces vehicle speeds with traffic calming and diversion measures
- Includes both on-street and off-street facilities



E1 – Engineering: *Portland, Oregon*



Combined Bicycle Traffic over Four Main Portland Bicycle Bridges Juxtaposed with Bikeway Miles



15 years of bicycle infrastructure:

\$60 million

- *only 0.7% of PDOT's budget*
- *\$3.75/annual cost per capita*

Interchange along Rt. 26 outside of
Portland: **\$125 million**



El – Engineering, ARTS/Aiken County



- Field Investigation
- Existing Conditions Mapping
- Opportunities & Constraints
- Suitability Analysis

Following the Bicycle- and Walk-Friendly Community (BFC & WFC) Assessment model



Opportunities



Close gaps in the existing network



Opportunities



Intersection Improvements



Rural connections



Opportunities: Bike/Ped River Crossings



Bridge Opportunity



New Bike/Ped Bridge?

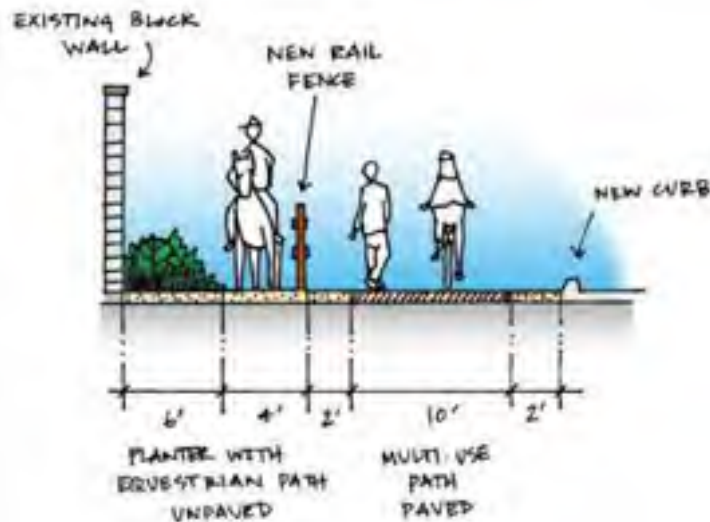
Coordinate with ARTS 2035 LRTP, North Augusta Greenway Master Plan, US 1 Corridor Study, LSCOG Bike/Ped Study



Opportunities: Bike/Ped River Crossing Iconic Possibilities



Innovative Design Guidelines





The Six E's

ENCOURAGEMENT, EDUCATION, ENFORCEMENT

Existing Programs



Existing Partners



E2 – Encouragement

- Increases participation and awareness with:
 - Special events and contests
 - Outreach campaigns
 - Media coverage
- Should be targeted to all ages and abilities
- Shapes a community's “culture” for biking and walking





E3 – Education

- Markets the potential benefits of biking and walking
- Promotes safety for bicyclists, pedestrians, motorists, and other road and trail users
- Promotes existing bicycling and walking facilities
- Offers tips for incorporating active transportation into everyday life



E4 – Enforcement

- Increases awareness of bicyclists and pedestrians
- Improves driver behavior
- Helps children follow traffic rules
- Decreases perception of danger





The Six E's

EVALUATION & EQUITY

E5 - Evaluation

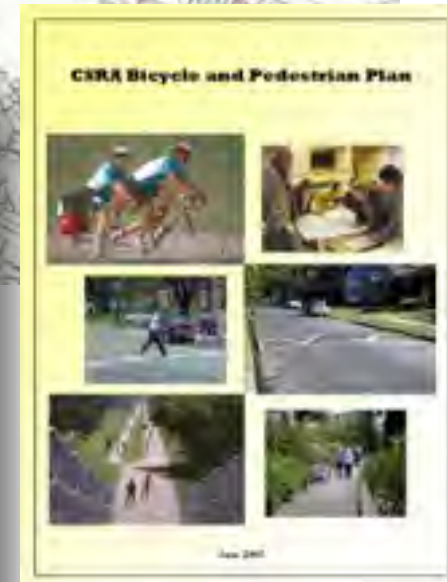
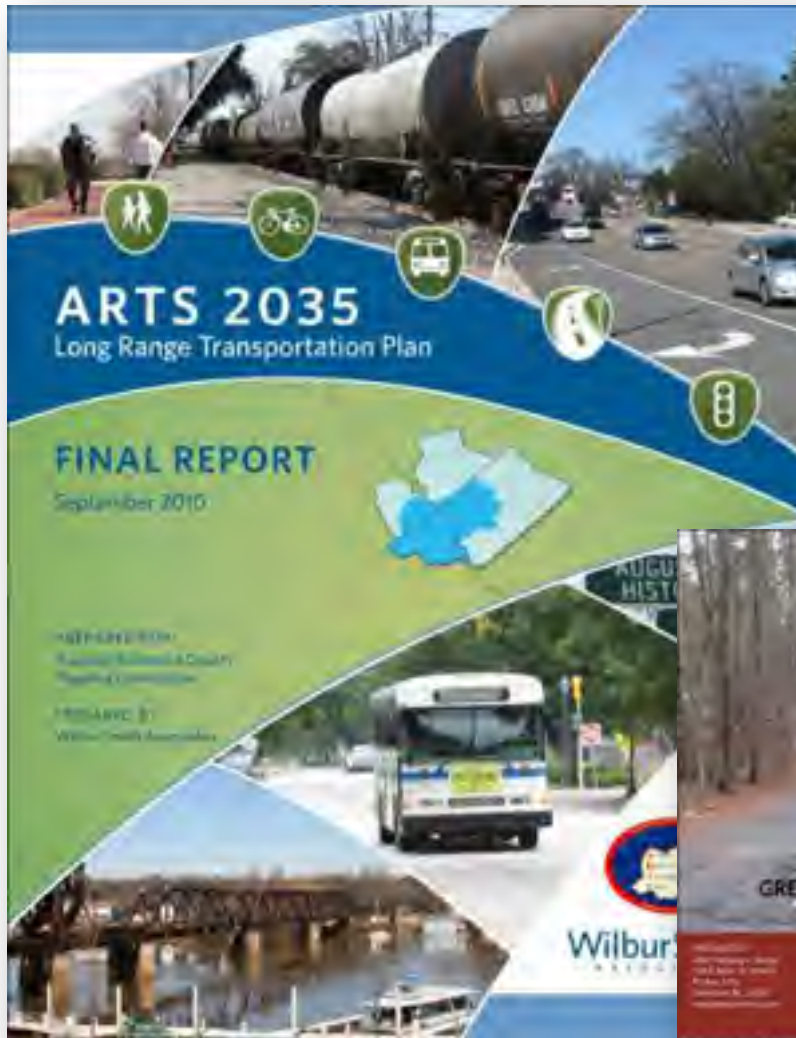


- Policy & Planning
 - Review Background Documents and Plans
 - Municipal Code Review
 - Review Existing Legislation, Policy and Documentation
- User Needs Assessment
 - Demand Analysis
 - Safety Analysis
 - Suitability Analysis

Element	Required	Optional
Pedestrian Accommodations	• Sidewalks	• Curb extensions at intersections if on-street parking is present
Bicycle Accommodations	• Shared lane with markings	• Bicycle lanes
Transit Accommodations	• Benches or shelters at transit stops	• Local service
Parking Configuration	• Parallel (preferred) or angled	
Roadway Features	• Curb & gutter	• Permeable pavement in parking areas • Roadway islands, or central features such as fountain at gateways • "Festival" <ul style="list-style-type: none">• May have flush curb and edge-defining pavers.
Streetscape	• Planting strip • Lighting, pedestrian scale	• Underground utilities • "Festival" <ul style="list-style-type: none">• May have bollards or other features that provide additional definition between pedestrian and vehicle zones.

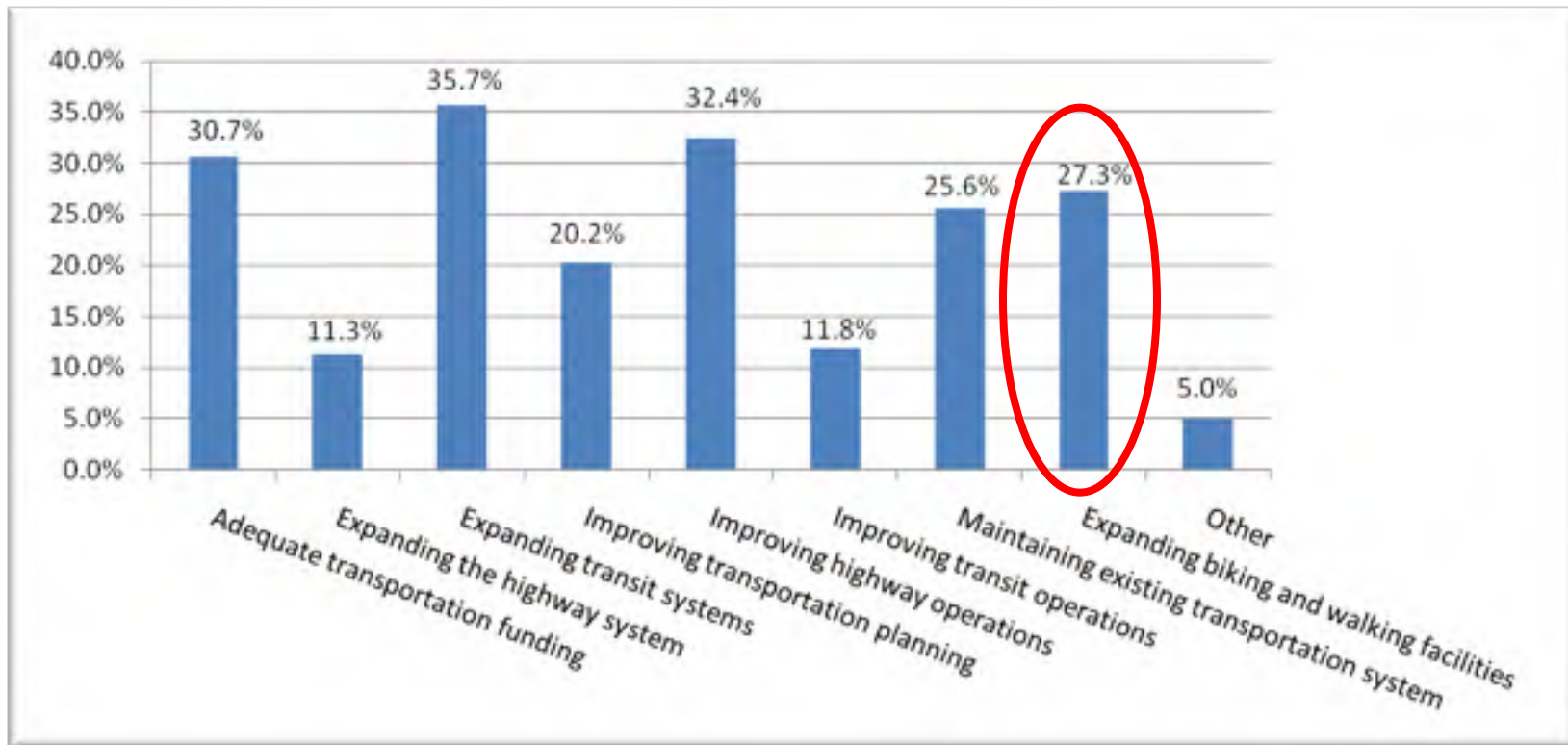


Building on Existing Plans...



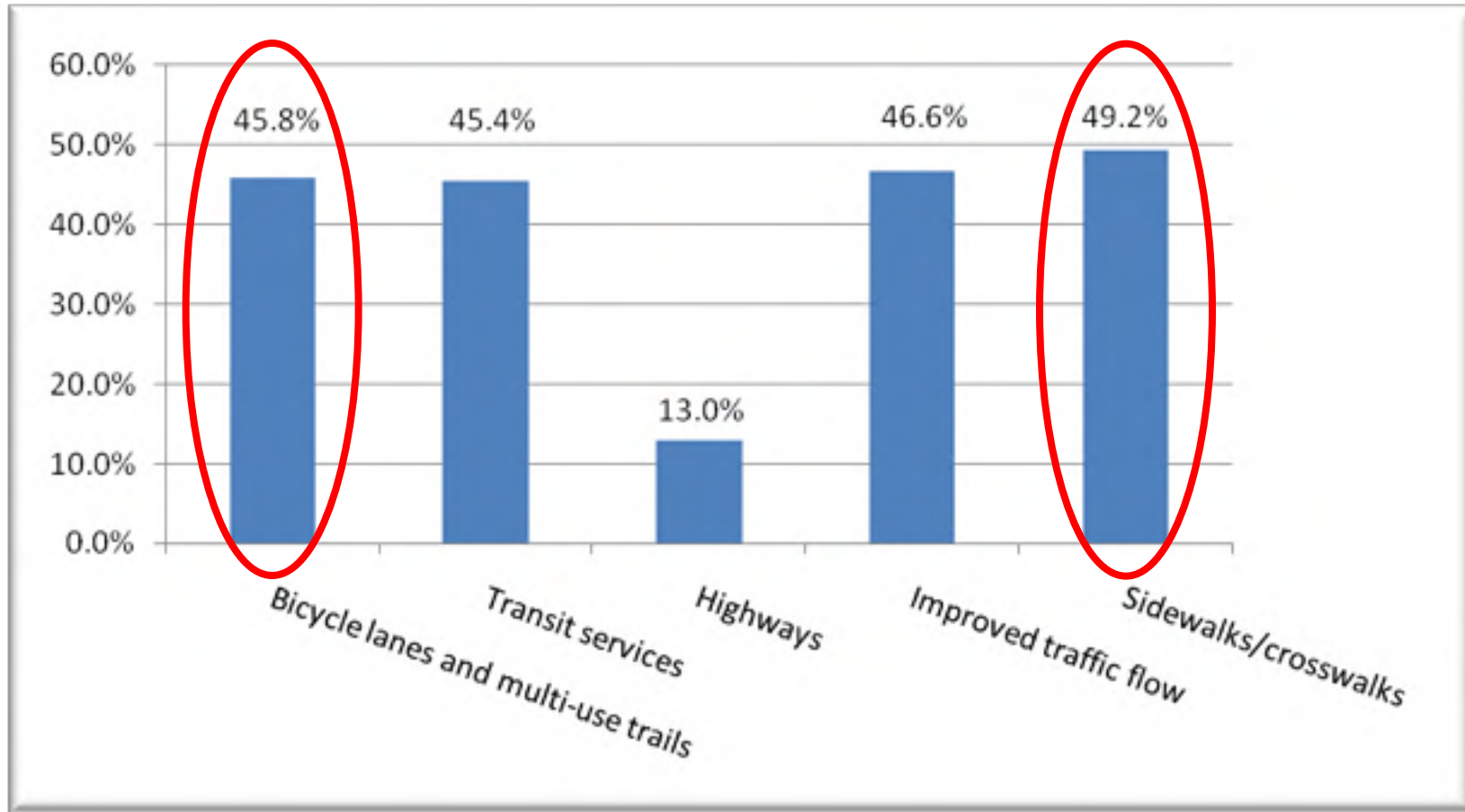
L RTP 2035 Survey Responses

The Most Effective Way to Reduce Transportation Congestion. . .



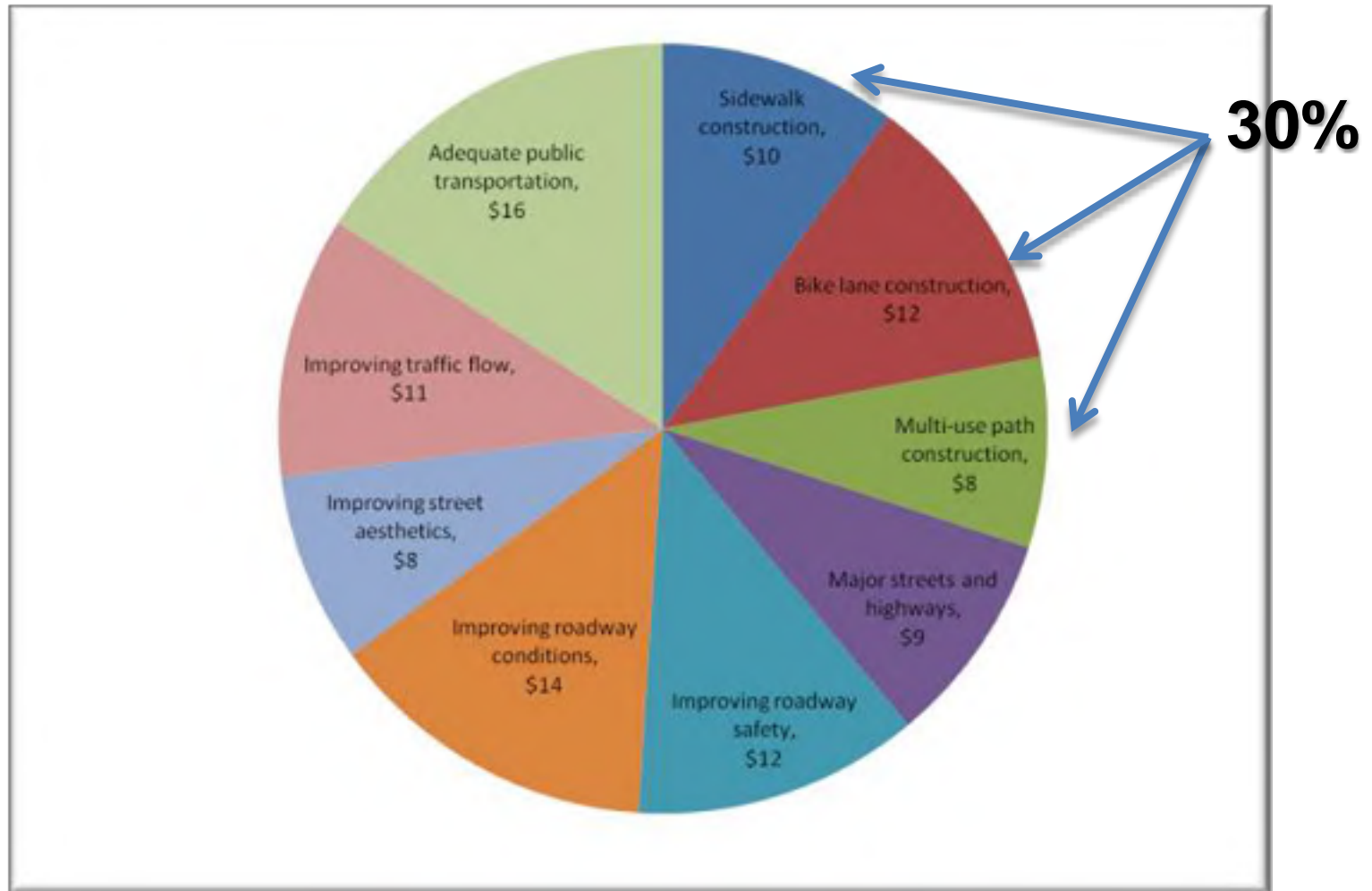
L RTP 2035 Survey Responses

Transportation System Elements Desired for the Future. . .



L RTP 2035 Survey Responses

Given \$100, how would you spend money to improve multimodal transportation system?



Complete Streets



- SCDOT Policy (2003)

“...bicycling and walking accommodations should be a routine part of the department’s planning, design, construction and operating activities...”

- GDOT Policy (2011)

GDOT Design Manual, standards and guidelines are established to ensure that accommodations for bicycle and pedestrian users are provided “on all appropriate infrastructure projects where pedestrians and bicyclists are permitted to travel.”

Currently, there are no local complete streets policies in place.





Demand Analysis – Existing Data

Mode Share Data:

	Aiken	Columbia	Edgefield	Richmond	All Counties	Georgia	South Carolina
Drive Alone	82.8%	85.0%	79.8%	77.3%	80.6%	89.7%	92.2%
Walk	1.4%	0.8%	0.6%	6.0%	3.33%	1.7%	1.9%
Bicycle	0.2%	0.2%	0.0%	0.4%	0.3%	0.2%	0.3%

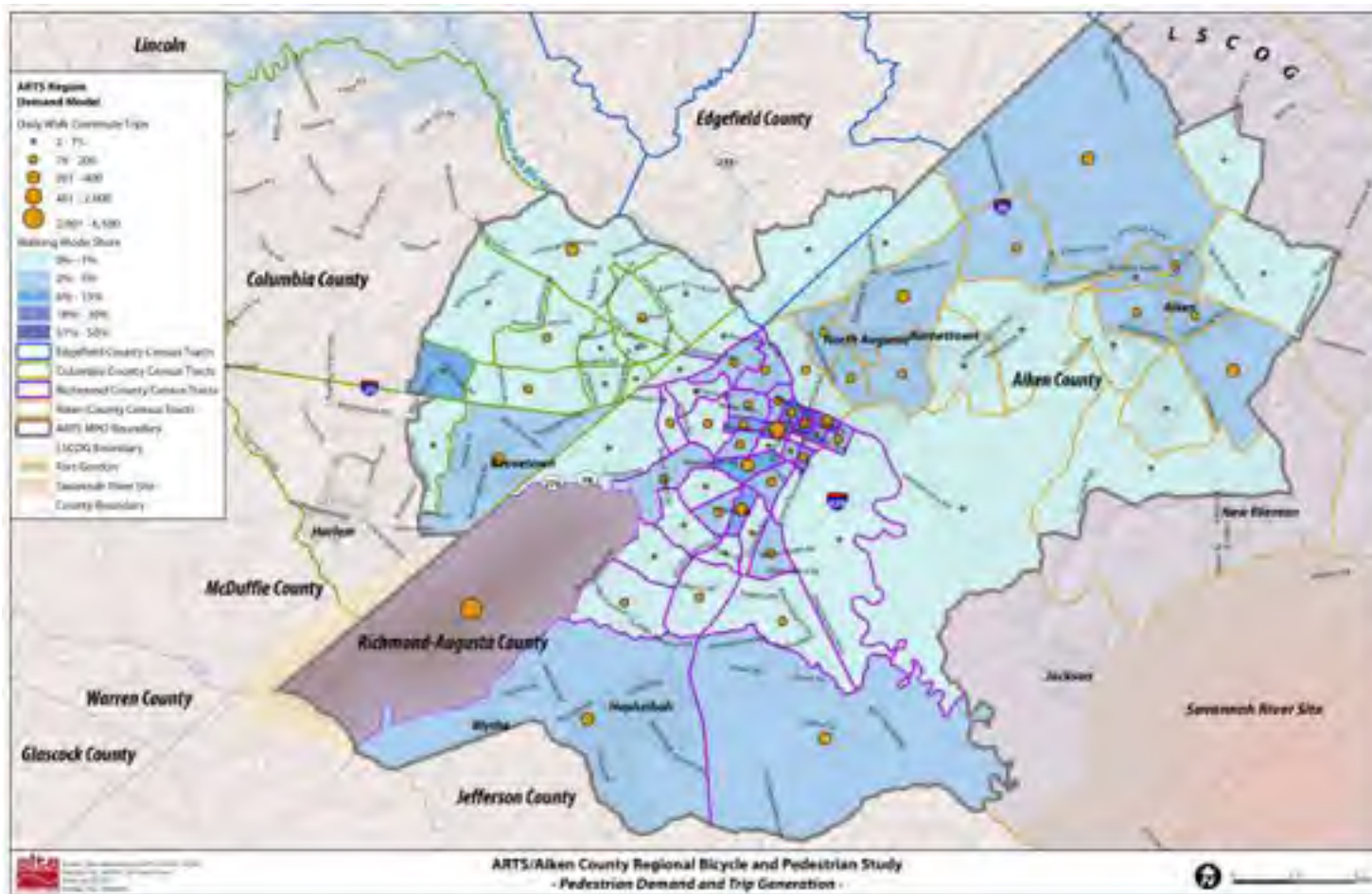
Source: ACS 2005-2009 Five-Year Estimates

Note: analysis excludes areas of counties outside the ARTS boundary.

- High walking mode share
- Drive alone percentages are lower than state averages

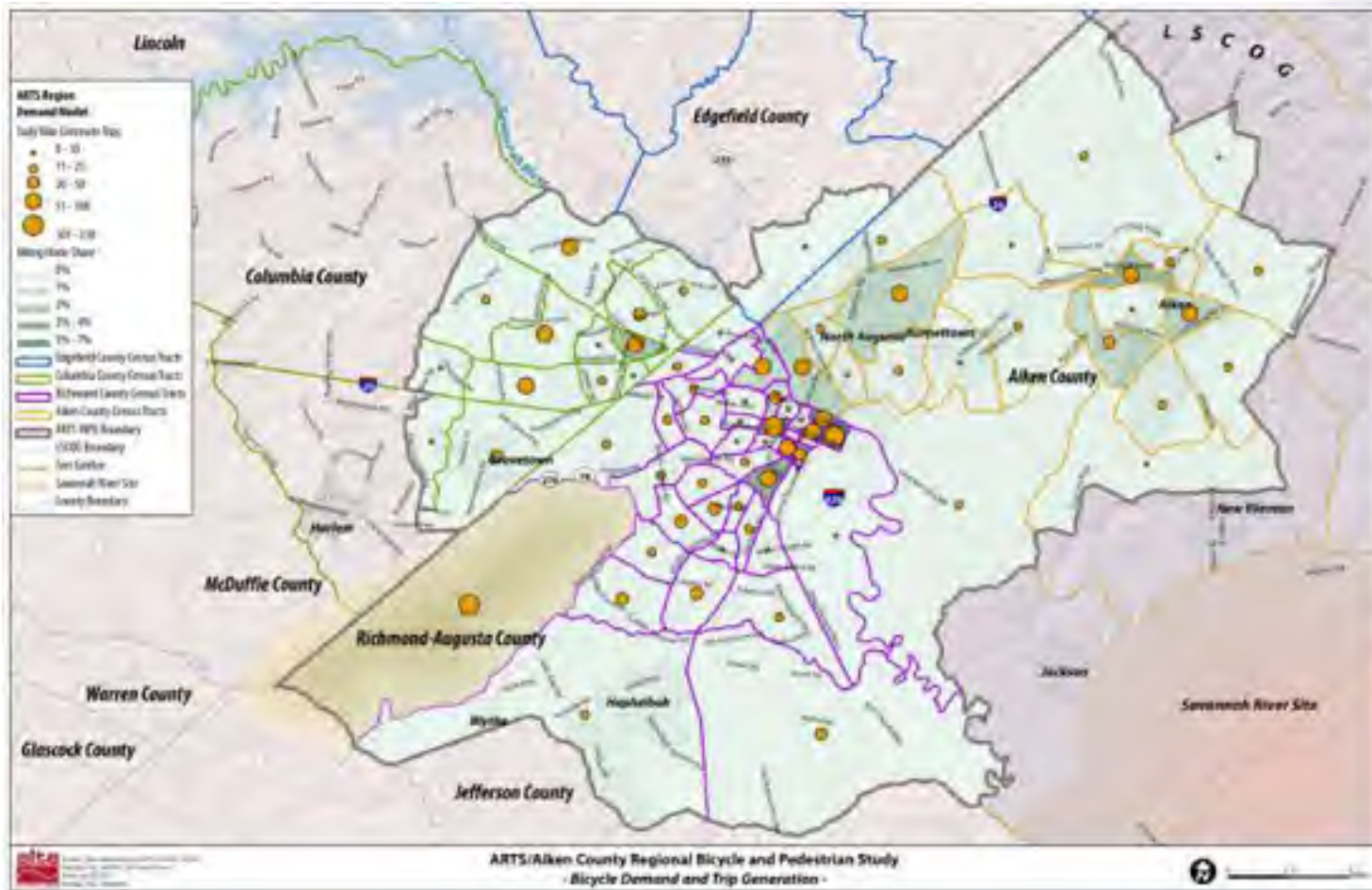


Distribution of Pedestrian Trips ARTS Region





Distribution of Bicycle Trips ARTS Region



Demand Analysis – Collecting New Data



- Bicycle and Pedestrian Counts:
 - 2 days, 2 hours each day
 - 23 locations
 - Weekday and a Saturday
 - A.M. peak travel time
 - Volunteer Counters
- Snapshot of bicycle and pedestrian activity throughout the region

SCREENLINE COUNT FORM
ARTS/Aiken County Bicycle and Pedestrian Plan Update

Name: _____ Location: _____ Zip: _____
Date: _____ Start Time: _____ End Time: _____
Weather: _____ Counting Facilities: _____

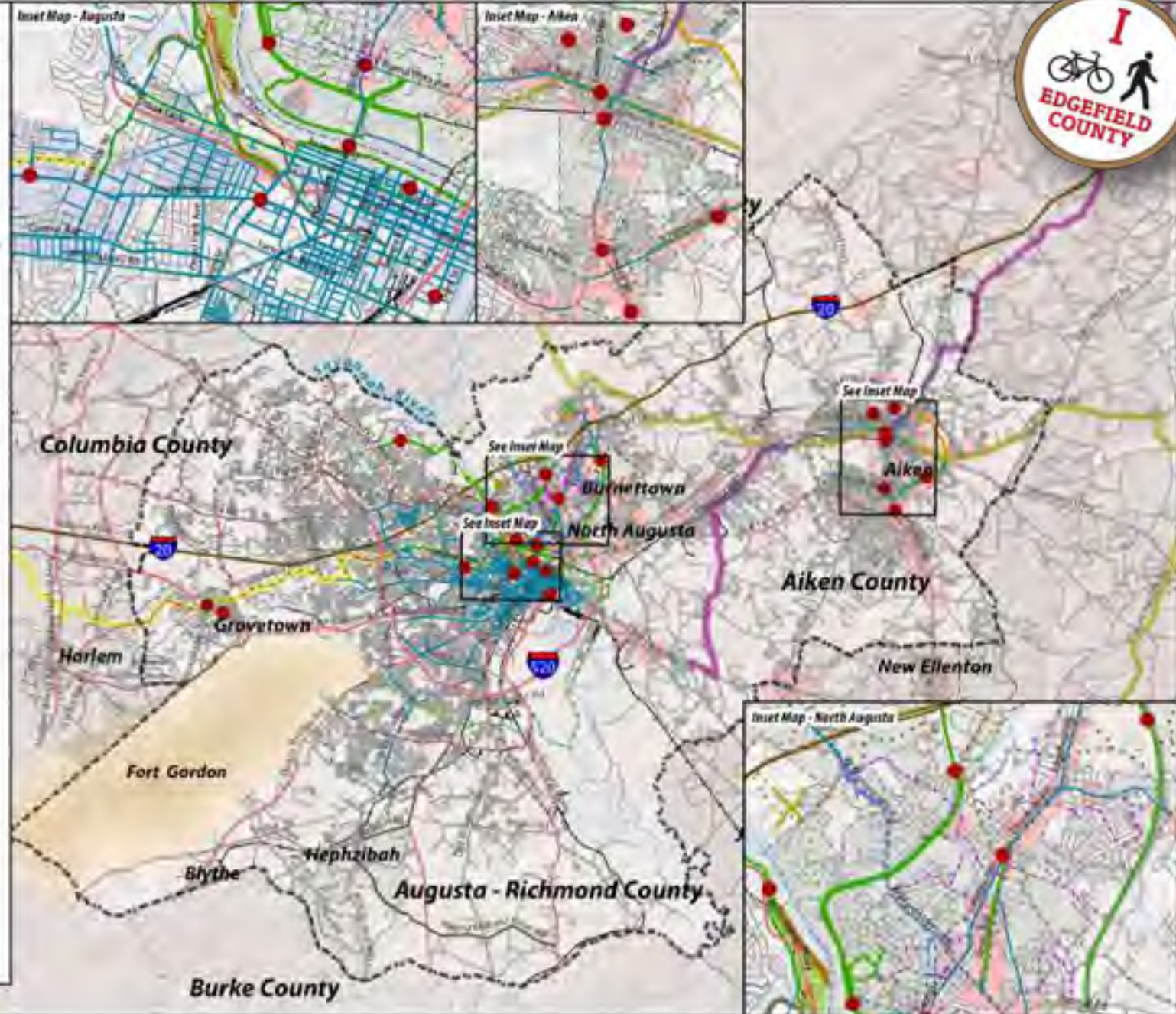
Please fill in your name, count location, date, time period, and weather conditions (fair, rainy, very cold).
For existing facilities, list any bicycle or pedestrian specific features such as sidewalks, bike lanes, multi-use trail, or paved shoulder. Count all bicyclists and pedestrians crossing your screen line under the appropriate categories.

- Count for two hours in 15 minute increments.
- Count bicyclists who ride on the sidewalk.
- Count the number of people on the bicycle, not the number of bicycles.
- Pedestrians include people in wheelchairs or others using assistive devices, children in strollers, etc.
- People using equipment such as skateboards or rollerblades should be included as "Others."

Time increments	Bicyclists		Pedestrians		Others
	Female	Male	Female	Male	
8:00-8:15					
8:15-8:30					
8:30-8:45					
8:45-9:00					
9:00-9:15					
9:15-9:30					
9:30-9:45					
9:45-10:00					
Total					

Please return form to:
Marye Moultrie, Augusta-Richmond County Planning Commission
525 Telford St.
Augusta, GA 30906
Phone: 706-821-3807
Scan and send by e-mail to: mmoultrie@counties.ga.gov

- Count Locations
- Proposed Facilities (previous plans)**
 - Greenway
 - Multi-Use Path (Under Constr.)
 - Bike Lane
 - Bike Route
 - Side Path
 - Soft Surface Trail
 - Bikeway (Type to be determined)
 - Trails by Developer
 - Sidewalks
- Existing Bike & Ped Facilities**
 - Existing Connector
 - Existing Greenway
 - Existing Side Path
 - Existing Soft Surface Trail
 - Other Trails
 - Sidewalks
 - Paved Shoulder (<= 3 ft)
 - Paved Shoulder (> 3 ft)
- SC & GA Statewide Bike Routes**
 - Central Route
 - Savannah River Trail
 - Georgia State Bike Route
- Roadway Features**
 - Major Roads
 - Local Roads
 - Railroads
 - Shopping Areas
 - Historic Areas
 - Greenways
 - Parks
 - ARTS MPO Boundary
 - County Boundary
 - City Boundary



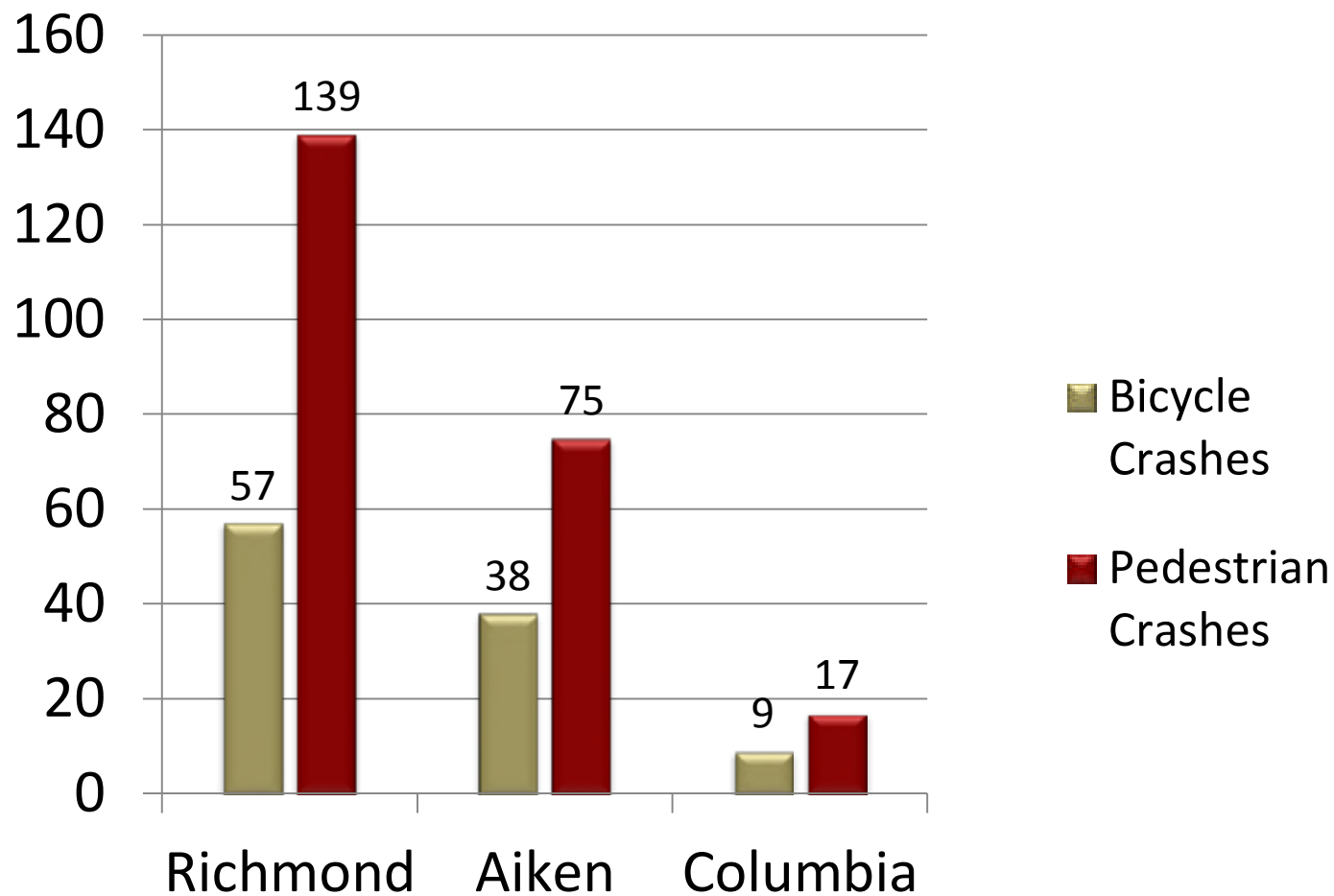
ARTS/Aiken County Bicycle and Pedestrian Counts



Safety Analysis



Total Crashes by County
2008-2010





Pedestrian Collisions

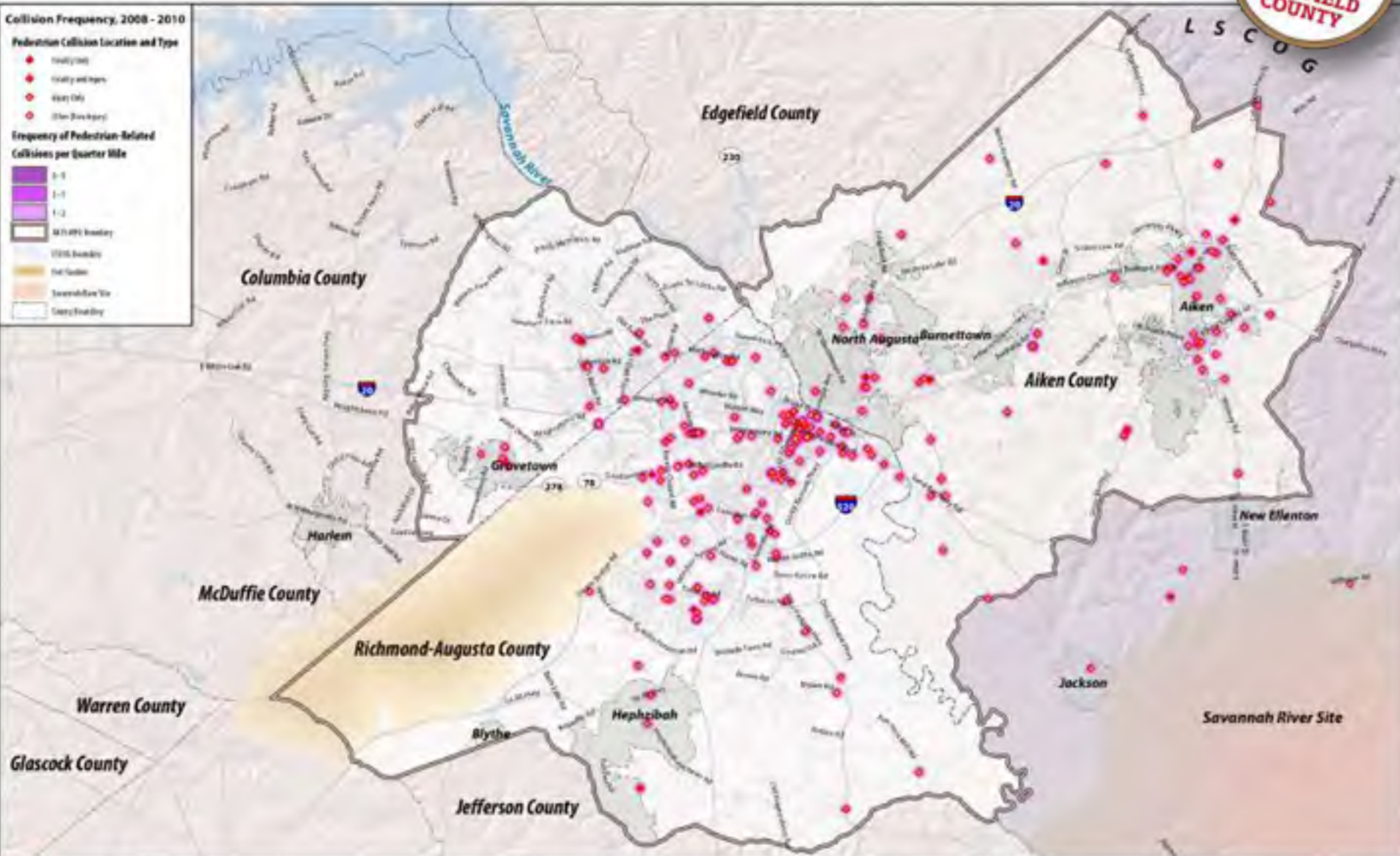
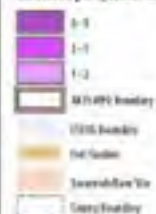


Collision Frequency, 2008 - 2010

Pedestrian Collision Location and Type

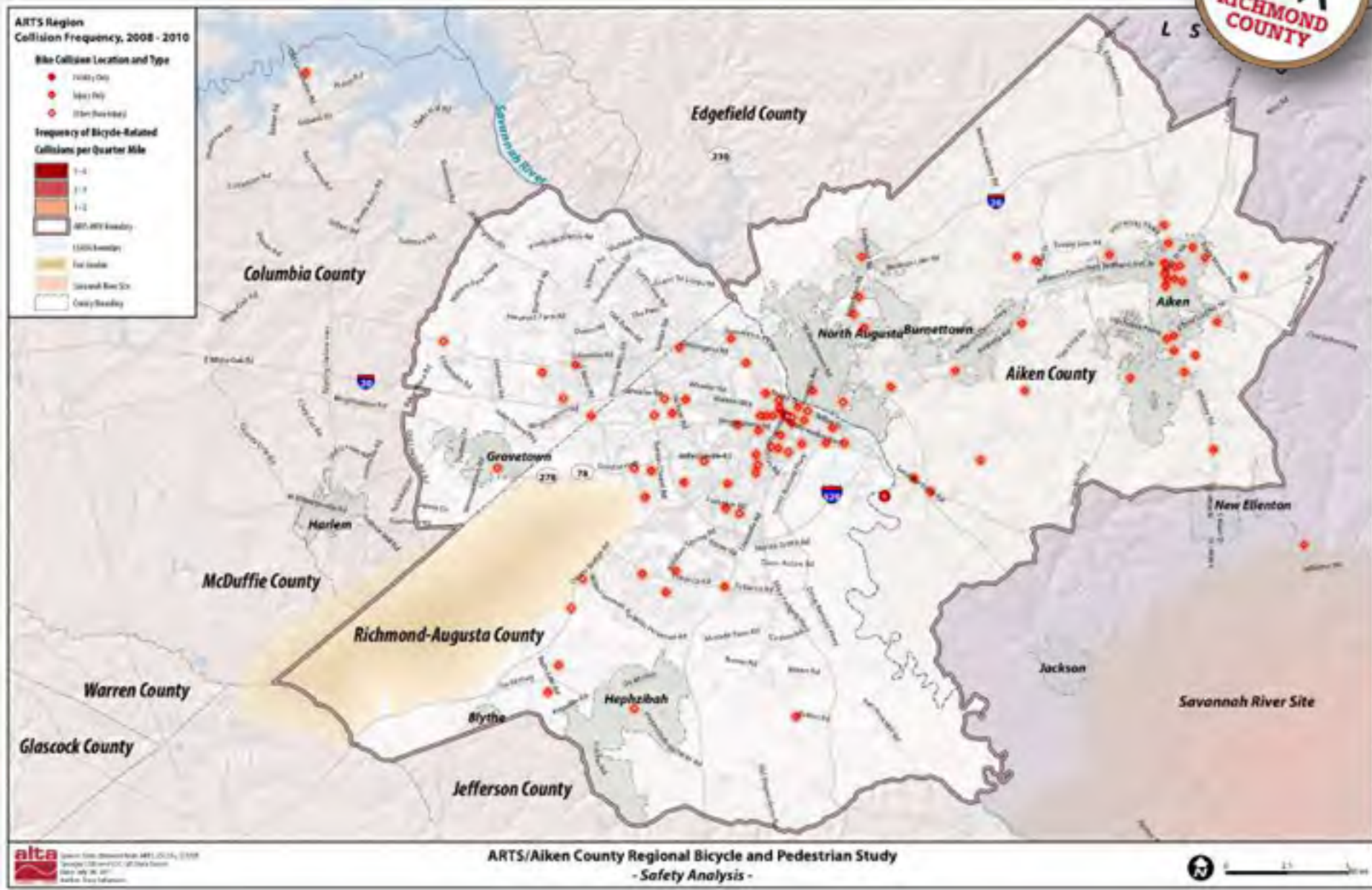
- Intersecting
- Intersecting and Driveway
- Driveway Only
- Other (Bicycle)

Frequency of Pedestrian-Related Collisions per Quarter Mile





Bicycle Collisions





E6 – Equity

- Relies on targeted outreach and a diversity of programs and events
- Ensures appropriate geographic distribution of bike facilities, programs, and education opportunities



Bringing it all together...

- Infrastructure & Non-infrastructure Recommendations
- Cost Opinions and Prioritization
- Priority Project Description Sheets
- Implementation Plan
- Potential Funding Sources
- Draft Bicycle & Pedestrian Plan



Network Development Considerations

- Public Input
- Major attractors/generators
 - Campuses, Fort Gordon, Hospitals, etc.
- Access to transit providers
- Arterial networks
- Neighborhood bike routes
- High Crash locations
- River Crossings
- Connections to existing trail and greenway systems
- Rural road needs
- LRTP, LSCOG, & N. Augusta Greenway Master Plan recommendations



Implementation: Leverage Local Funding



Near-term opportunities:

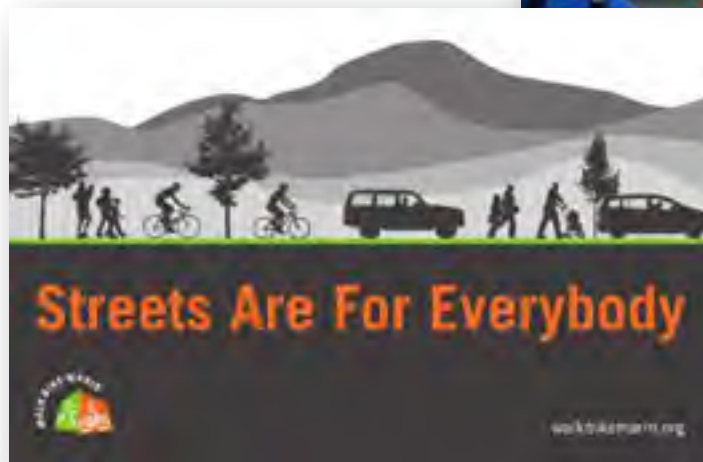
- Investments in Public Realm attract private investment
- Walkable development standards and incentives
- Public-Private partnerships
- Health Care Community partnerships
- Sponsorships



Implementation for the 4 E's

Programs are “low-hanging fruit”:

- “Best Practices – 4 E's” Report
- Action Plans for “Bicycle and Walk Friendly Community” Designations



Implementation: Rural Road Upgrades



Implementation: Trail Upgrades/Rail w/ Trail

Augusta Canal Trail Before



Implementation: Trail Upgrades/Rail-with-Trail

Augusta Canal Trail After



Implementation: Complete Street Retrofits

383 and Oakley Pirkle Rd. Before



Implementation: Complete Street Retrofits

383 and Oakley Pirkle Rd. After



Public Involvement



Public Involvement Strategy



- Project Website: www.BikeWalkArts.com
- Media Releases/E-Communications
- Public Workshops
- Targeted Focus Groups
- Special Event Booths
 - Aiken's Makin', Arts in the Heart
 - Whiskey Road Race and others...
- On-line Survey



Tonight's Break-Out Groups



- Four stations
 - Bicycling Infrastructure
 - Walking Infrastructure
 - Bicycling Encouragement, Education, Enforcement & Evaluation
 - Walking Encouragement, Education, Enforcement & Evaluation
- Share your thoughts
- Each station will report back at 6:30 p.m.





THANK YOU!

John Cock, Project Manager

704.968.5053

johncock@altaplanning.com

www.altagreenways.com

